

## **Economics of the Creative Industries – What is the Pipeline for?”**

*Diane Coyle OBE, Vice-Chairman of the BBC Trust and Former Advisor to the Treasury*

Stuart Bartholomew Ladies and gentlemen, welcome back to our conference event, and it gives me very great pleasure to welcome Diane Coyle, Diane, as you know, is vice-chair of the BBC Trust, and I think you will also be aware that there has been a little bit of tribulation in that area of the public realm. But Diane comes as a very eminent economist who is not only an academic in her own right, but has been a very important advisor to Treasury. And we've invited her to speak on the economics of our creative industries, that end of the pipeline. And moreover what a pipeline might be for, so with no more ado I welcome Diane Coyle.

APPLAUSE

Diane Coyle Thank you for the introduction, it's a great pleasure to be here today. I am vice-chair of the BBC Trust but I am not wearing my BBC hat today, I'm wearing my hat as an economist, which is not a very popular thing to be these days, but I've been working on the economics of new technologies for, oh, twenty years now, and that's increasingly come to overlap with the economics of the creative industries, so somewhat to my surprise different parts of my life have converged on the creative industries.

So I thought I'd start with a nice glowing reminder of the summer of sport, of the Olympics, and I was at a conference last Friday where the head of new media for the Olympics showed a four or five minute reel of Olympic highlights, and I have to confess that I welled up a bit, it was all terrific. And of course it was about sport, but the fantastic opening ceremony reminded us, if we needed it, that we are rather good at music, at dancing, at storytelling and at drama. Now I could spend a lot of time talking about the figures, the share of GDP accounted for by the creative industries, and the figures are actually a bit rubbish, we don't collect very good statistics. Hasan Bakhshi at NESTA and his colleagues there have done a lot of really good work on this, but we don't collect the statistics in a form that would be very useful, because we have industrial and occupational classifications that don't entirely map onto your intuitions about what's creative and they include lots of other things too, and definitions have changed, and anyway the statistics are not very good at measuring some of the intrinsic qualities of creative output, so it's all a bit of a mess.

But I think there are two things to take out of thinking about the statistics, whether you think it's the 2.9 percent or the 5.6 percent or the figures that are more like ten percent. One is that, as a share of the economy the creative sector, however you define it, is in the same ballpark as the financial services sector. And this is a comparison that I will come back to a couple of times later. The financial services statistics are a mess as well actually, and for some quite similar reasons, that they are

quite intangible and we are not very good at measuring what they do, and there are definitional difficulties. And the eight percent of GDP or so that is often cited is probably a great overstatement of financial services. So roughly in the same ballpark, and in a funny way there are a lot of similarities between the two sectors, because financial services too are an industry, a sector, where Britain has this longstanding historical comparative advantage, we were real innovators in financial services. There was actually a lot of entrepreneurship, a lot of creativity involved in their origin and we've been good at it for centuries. And it's something that we ought to build on in thinking about how the economy is going to grow in future. So much as we hate bankers at the moment financial services are a UK skill.

Now we don't hate the creative sector, but it's in the same way a historical advantage of this country, something on which we absolutely need to build when we are thinking about future growth and future exports, and the UK is one of only two net exporters of pop music in the world, which is one of my favourite facts, because the other of course is the United States, where performers have the advantage of a huge domestic market to give them their leg up to success, and we don't have that, and we still manage to be a net exporter of pop music. And maybe we'll come back and talk about why that might be later.

So the key message is that we are good at the creative stuff and we have been for a very long time, and I've talked about it as a sector, and it's useful to think about it as a sector, but we also need to think about it as something that contributes to the whole economy. And I'm going to show you, this is my only graph for the whole presentation, so don't worry, but it's one of my favourites, I've been using it for many years, the blue line shows you the level of GDP turned into an index since 1990, the black line is the amount of stuff that we use in the economy, the amount of material that goes into making GDP, and therefore the red line is the difference, and that's what the ONS is interested in in calculating these figures, it's part of the environmental accounts and they are interested in how efficiently we are using stuff to create value. But what I think is interesting about this is that it tells you that what's valuable is increasingly what's not stuff, it's increasingly intangible. And part of this is that we are a service-based economy, and a lot of the growth is coming in services, so that includes everything from the cleaning and the care homes to the professional services, and a lot of the creative sector as well.

And there's this, even if you think about material stuff, manufactured products, the value in those is the intangible part of them. If you compare a five pound t-shirt that you buy from Primark and a twenty five pound or a fifty pound t-shirt that you might buy from a department store, the volume of stuff in them might not be all that different. What's valuable about the more expensive one is the design, the cut, the quality of the fabric, it's the intangible aspects of the stuff and not the molecules

themselves. And there's this hollowing out that we've seen in all dimensions of the economy that's really quite interesting, being driven by these digital technologies, in the way that there's a hollowing out of the income distribution and there's a hollowing out of the kinds of jobs that people have, there's actually a hollowing out of the value characteristics and the products that are being made as well. In this intangible economy reputation and trust are absolutely everything. If you look at the value of any company listed on the stock market by its market capitalisation, what people would pay for it, and look at the assets that it lists in its accounts, almost none of the assets are tangible, it's almost all intangible stuff, and a lot of that is goodwill as it's called in the accounting terminology. And what this really means is that the value of companies depends on reputation, trust, the quality of the work people do in ways that can't be monitored.

So if you think about somebody writing a computer software programme, which is quite a creative skill actually, as well as technical skill, their boss or their client doesn't know how well they are doing it until they've finished and they press the button and see whether it works or not. And the only way to monitor the quality before that point is actually to do the work again yourself and see how it is, so you have to trust the person who's doing it for you, and they have to have that solid reputation. It's all the more true in the creative sector where a lot of good are experience goods actually, and you don't know what they are like until you've already consumed them. And it's obviously true in the performing arts, but true of lots of other things as well, so this question of reputation is all important, and it means that we need to think about institutions, organisations, companies, in a very different way than we've grown used to in the last twenty years, and over a much longer timeframe and in terms of relationships and in terms of person to person trust.

So this emerging economy is a very different one than the neo-liberal free market, sell things when the price is right, kind of economy that we have grown used to thinking about. Creative skills matter throughout this new economy. And obviously I'm using a broad definition, it's not that you need to have particular performing art skills, or particular design skills, but we've recently carried out in the economics profession a number of surveys of employers to ask if they are getting the characteristics they want in the graduates who are coming out of university economics degrees. And the answer is no. And of course all employers always say that, but it's very interesting to see why they say no. And government, city, private sector employers and economists all say that the key missing skill is communication skill. Economists do our work, we do our work in terms of algebra and statistics. Very few economists come out of university able to communicate their technical skills to the people that they have to deal with, whether it's in government or private sector clients. And so that communication skill is something that they probably haven't been taught at all, certainly not through university, probably not through the later part of high school,

possibly even not since primary school, when they were first taught the basics of verbal, oral, and written communication.

So that's just one example, and in all kinds of ways creative skills are important throughout the whole of this weightless and increasingly digital economy. So it's important to think about the sector, but it's important to think about it in much broader terms as well, and the human capital that we are building up for the whole economy in the pipeline that's your subject today.

Now, there are challenges in this emerging economy. One of them is the challenge to people's business models. There are cohorts of young people who don't know that you are supposed to pay to listen to music, and they readily go and download it from sites, and all the legal chat hasn't resulted in any change in that kind of behaviour yet. So of course people are trying to devise new business model methods to tackle it. I was interested to see in the paper today that music industry revenues have gone up for the first time since 1999 and digital sales are driving an increase for the first time. So there's an early sign that things might be turning around. But we don't know whether those young cohorts will ever get used to paying for things that they download for free, and some of the business models are great for some of the organisations trying to implement them, but not for others, so Spotify seems to be doing OK, but the record labels and the musicians are not so pleased with this new business model because it's reduced their revenues quite dramatically. And it's leading people to think about new kinds of business models as well. This is Mumford and Sons, as I'm sure you recognise, and they are now massively successful, one of the most downloaded in last year's figures that were reported in the paper this morning, and they built their success, their platinum sales in the States, through a punishing schedule of live concerts and touring for several years before they became big, and that long investment in live performance and live encounters is a large part of the explanation for their success, as well as the music if you happen to like it of course.

LAUGHTER

I do, I think it's great. So there's a real business model challenge. By the way, higher education's next, and I hear a lot of people in higher education talking about the MOOCs, the massively open online courses, as a bit of a fringe phenomenon, and of course they are much bigger in the US than they are here, and we have the Open University anyway, but I would not be surprised, having seen these technologies cause huge disruption in so many industries already if this was not the next sector to suffer exactly the same kind of disruption, especially with the other pressures that we were hearing about from Peter earlier about the fees and the funding. There's a challenge of business models working out actually the essence of a successful business, how do you deliver to your consumers or to your customers what they want in ways that they will pay for, and that's changed, and the technologies are changing that profoundly.

There's a challenge, as well, in industrial strategy and skills. I spent five years as a member of the Migration Advisory Committee, and that ended last November, and one of the main jobs of the MAC is to devise a skills shortage list. The skills framework that we have is defined very much in conventional academic cognitive skills terms, and although the NQF framework tries to accommodate other skills it's not a great match. And there are some skills that don't fit into that at all. The one we had particular trouble with was my passion in the arts, which is ballet, and you know, the kind of skill that you need as a ballet dancer doesn't fit into that kind of skills conceptual framework at all. And this country is, the dance scene is absolutely thriving at the moment, it's an international magnet for starts of all kinds, we have some of the best performing groups in the world, I think only some of the classic Russian troupes would outclass the Royal Ballet and the English National Ballet and the Birmingham Royal Ballet and so on, so it's a fantastically successful sector in creative terms, probably in economic terms too although I don't think they've ever done that assessment as an industry.

And once you'd explained to people in Whitehall and the other economists on the MAC that there was a problem about the skills framework and how it didn't fit this particular category, they understood it and it was fine, and we used what's called bottom-up evidence, the evidence that the organisations send in to make sure that they stayed on the skills shortage list, but it's an illustration of the mismatch between the framework and the way we think of our skills and the kind of structures, the policy structures that we have around creating the skills pipeline for the future, for the future of the sector and the future of the whole economy. So I'm going to come back and talk about that a little bit later.

But meanwhile I want to contrast the way we don't really think strategically about creative skills and the creative sector and the way we do think about the finance sector, this is Canary Wharf of course, where I worked for several years in the original tower. There's this figure in people's heads that finance is eight percent of GDP. It's actually incorrect, but it's in people's heads, and you'll have heard in the banking crisis politicians referring over and over again to the need to ensure that finance is healthy although better regulated, because it makes such an important contribution to the economy. And we think about it in policy terms therefore as being really important, and the voice that it gives the industry in Whitehall and Westminster is therefore quite significant. So although you shouldn't get hung up on the definition of the creative sector and exactly what the figures are that does matter in terms of having the strategy for the sector and in making sure it gets its due weight in this national debate about what policies ought to be and what parts of the economy are going to be important for employment and exports, and funnily enough, as I said before, finance is quite similar to the creative sector in many ways, it's just as intangible, it has its own

kind of creativity, I mean perhaps more creativity than we might like actually. And just to give you an idea of how much difference this makes...I lied, there is another chart.

LAUGHTER

The key thing, this is a chart from Bank of England report showing different estimates of the subsidy that the banks get from the tax payer, just through having a guarantee that their businesses are not going to go bust and they get cheap funding. And you can see that it's changed over time and there are some quite different estimates anyway, depending on what method you use. And I'm not at all interested in talking about the detail today, I just want you to clock the axis, the vertical axis, and how many billions of pounds that is. And this isn't all the subsidy that the banks get from tax payers actually, this is just part of it, so even though it's been coming down, and even if you look at the smaller pink bar for 2010, which is the latest figures in the chart, it's twenty five billion pounds a year, and there's more, and they get favourable regulatory treatment as well, and they are insulated from competition and they have, you know, a license to print money and pay it to themselves. Cheap shot.

Now what kind of subsidies does the creative sector get from the government? Well obviously there's some through higher education and I don't actually know what the proportion, if you can allocate the proportion of that that goes to these, the skills that we are interested in here, the Arts Council grants and aid funding is just under half a billion a year, and Lottery funding is about a quarter of a billion on top of that, and of course the Arts Council funding is coming down, DCMS is an easy target and was in the last spending round, probably will be in the next spending round. So although these are two sectors that are quite comparable in terms of their contribution to the economy and their future growth and their future contribution to exports, the weight they have reflected in the amount of tax payer subsidy they get is extraordinarily, extraordinarily imbalanced. And as I said employers want people who've got creative skills as well as people who can add up.

So let's go back and talk a little about the skills and how we think about those. I'm a chair of governors for a primary school in west London as well, and this is something that preoccupies me quite a lot, because what we are measured on and our success as a school and how much freedom we get from the government to educate children as we think best depends entirely on hitting certain targets in terms of cognitive skills. That's completely privileged by the system. So this is roughly how I would think about it, the general academic cognitive skills and specific areas of knowledge, so do you have analytic, verbal, numeric skills, do you understand economics and the technicalities of economics? And we have a system that very much focuses, the whole education system very much privileges these kinds of cognitive skills. But then there are important non-cognitive skills as well, that matter very much to the future of the economy, and there's the innate creativity, there's the experience and training, and

what I've labelled personal skills here. Actually I just learnt this fantastic new word yesterday, abductive reasoning, there's inductive, deductive, abductive, and I didn't know about the abductive category. Being able to figure out from a few pieces of information how you might join the dots, what the story might be, a kind of storytelling skill. I'm sure there are people here who know much more about that than I do. And of course it's been a long complaint in the UK that we have a system that values much more cognitive skills, academic skills, people who are able to be trained to become members of the classic professions, the lawyers and accountants or even the politicians, and that implicitly vocationally means people who are not that bright, and craft skills completely, completely, undervalued by the system. That whole process of repeated practice and experience being so completely undervalued by the education system.

My son, who is at high school, wanted to do both product design and music as GCSEs, he couldn't do product design because the timetable was shaped so that only people who were going to choose the less challenging academic paths could fit it into the timetable. So you couldn't do triple science and product design. And he's doing music, and the music GCSE course, although I don't know it in great detail, doesn't seem to put much premium on spending a lot of time practicing and playing an instrument. I don't know how typical the experience is, it's not a bad school, it might not be typical experience though. But it's an example of this sort of implicit and very strong bias that our education system has towards quite a narrow understanding of skills.

And in particular I would say again communication skills, because after I discovered that the employer surveys in economics were saying that communication skills were lacking, and looked at other sectors of the economy this is an absolutely common complaint of employers. So we've built an education system that for very good reasons emphasises targets and hitting targets and measuring targets, and we are turning out children whose schools want them to pass the exams because they are assessed on the grades that they get in the exams, and it's given us an education system where we treat the children as vessels into which you pour certain amounts of knowledge, and it under-privileges their innovative, entrepreneurial, approach to learning themselves, it under-privileges practice and craft skills and so on. So we need a richer, a much richer conception of skills designed into the education system, and I think it would be fairer too, because of course focusing on the academic does make it much easier for certain kinds of children who have certain kinds of family and educational background to succeed.

And Peter was talking earlier about the access issues in universities, but you can't do it at universities, you can't reverse engineer the whole of the education system and the whole of society through access to universities. I've already talked about that, I won't

talk about it any more. There are lots of areas of policy where thinking about the skills pipeline that the economy needs would lead us towards thinking about it differently.

And I just wanted to pick out regional policy here. It's another, I suppose, classic area of failure in British policy terms. We've got one of the most centralised economies in the world, there's a marvellous map online at Yale University where they represent vertically on a map the concentration of economic activity in different geographies, and the only country that looks at all like the UK in having a single peak on top of London and a couple of mild bumps around the country, is France, which is very centralised in Paris. So we have the most centralised economy in the developed world. But of course this is BBC North, and there are areas of the country where one might be able to join up the dots in a different way to develop a creative pipeline of a much richer variety that would actually help the whole economy by rebalancing it somewhat. And I'm not going to talk much about the BBC but BBC North and BBC production activity around devolved nations is a public sector intervention, it is actually a kind of industrial policy, that is making a contribution, we hope, to developing some growth clusters.

I was saying earlier that a lot of these new weightless activities in the economy, in the creative sector to the face to face aspects, the personal aspects, are incredibly important. And there are massive cultural resources around the country. One of my favourite examples is BBC Alba, which is a relatively new service in Gallic, in Scotland. It's a joint venture with a private sector organisation called NG Alba, and it has actually quite a limited amount of funding for a television service. It has been fantastically successful in a number of ways, the number of viewers it's reaching is far more than expected at the time the service was launched, the number of people learning Gallic is going up. Part of the success, I have to confess, was that they got the rights to second division football in Scotland and they show them in Gallic with subtitles, and then Rangers got relegated, so in that quarter their numbers got a boost. But people are watching lots of other programmes as well, the current affairs programme about Europe is very popular. There's a lot of music. And it's obviously, somehow, somewhat serendipitously, tapping into the rich gain of Gallic culture in Scotland, in the language, but also in the music and the performance and the poetry and the literature. And the stars are aligned for it and it's been an amazing success. So that's a really promising example.

I live in an area of London where the two largest communities are I suppose the Poles and the Sikhs and Hindus. And in this country we have the experience of a decade of largescale immigration and lots of centres where the possibility for the kind of cultural fusion that you could have is really intriguing, and they've tended to be separate but of course we know that creativity is about the exchange of ideas and experiences, and we have a massive resource around the UK, absolutely untapped at the moment I

think, in terms of what we could do with that. And one of the things that we hope the BBC will think about is using the World Service as it comes into the license fee as not just an outward facing to the World Service but an inward facing service as well in our fantastically global and wonderful country. There's a limit to the number of these regional centres that you could hope would succeed because the economies of scale are quite important in the cultural industries and I think we underestimate them a little bit. You need to have a critical mass, you need to have enough people getting together to talk about and exchange ideas. And this is sort of classic agglomeration economy stuff, they are very powerful, these agglomeration economy factors.

So there won't be all that many of them but I would hope that there could be many more than just in London, and I'm as guilty as anybody being a Londoner now, think about it in those terms far too much. And I think that would need a much greater devolution of skills policy from Whitehall and Westminster to regional authorities. And there has been some talk about this, I was involved a few years ago in a project in Greater Manchester, the Manchester Independent Economic Review, to look at what might get the local regional economy onto a fast growth trajectory, contribute towards that rebalancing of the national economy, and we commissioned some really distinguished economists from around the world to do pieces of research and it was actually skills that proved to be most important in terms of the contribution. So never mind inward investment, nice to have, the thing that really mattered for future growth would be skills, at both ends of the spectrum, to use a misleading metaphor, you would want, you know, the fantastic set of universities and higher education institutes in Manchester, you would want those graduates to stay there, to build businesses there, to work in high value jobs there. Having MediaCity is definitely contributing to the quality of the jobs that are available, and they are not just TV and TV production jobs but the games industry jobs that now go with all the online parts of broadcasting, the very highly technical skills needed in R and D, BBC R and D and other broadcasters' R and D departments.

But also those non-cognitive, non-advanced skills that I was talking about earlier. Because it is an important creative sector and it needs an absolute kaleidoscope of different kinds of skills and different people. So I think the capitals of the devolved nations and some of the other large, regional cities, would have hopes of becoming exactly that kind of creative dynamo for the future growth of the economy, and the resources that they need are the people and different kinds of people that live around the country. So as long as we are realistic and don't think that we can get too many of them, and not every medium sized town is going to have a creative hub, I think there's real promise in that. But it does need regional authorities at least, or city authorities, to get their hands on skills powers and skills funding, and I'm very passionate about that, I think it's very important. The policy world is really poor at understanding creativity. People living in that world have been through the academic track, that's

what they've done well in, that's what they think is important and high quality stuff, because we are all egotistical after all. They don't understand the nature of the skills that a lot of you are interested in and dealing with, they just don't understand the nature of those skills, and they think of it as subsidy not investment, they think of it as one off money down the drain, that it's absorbed by the people who have received it and that's very nice for them. They don't understand the externalities and the long-term benefits that come from that. They don't understand the historic advantage that the UK has that's comparable to financial services.

And the Whitehall thinktank world is actually still dominated by a way of thinking about the economy that actual economists have more or less left behind now, not entirely but it's become quite old fashioned in economics to think about the economy as divided into things the private sector does and things that the public sector does, and the public sector should only do something if there's an obvious market failure and the private sector won't do both. And because of the kinds of technical change and the nature of digital industries and the dynamic processes that make them succeed I think economists have really come to understand that it's not either or, you've got to have both working together for a successful economy. And those American titans of the digital world succeed because massive spending by the American Federal Government went into what started as defense projects, but the internet, the investment in the leading universities like MIT that do this work, and where all this innovation came from. It was a major, major, public policy intervention that created the original investment for the great success of the digital titans, the Googles and the Apples and so on. And I think our policy world hasn't cottoned on to that yet. They don't think of it in those terms yet, and there's a conversation to be had with them about it.

And I think this would lead me towards my concluding points for you. One of the reasons that finance gets so much money, and gets so much attention, and gets so much cosseting from policymakers is that they have a story about their role in the economy. And for all that we are talking about the creative sector I don't think the story's been well told for this sector, and it needs to be done. And actually there's a lot of good old-fashioned lobbying to be done about it as well, but thinking carefully about the way that you approach the policy dialogue, what the story is, how to help people who are not creative and don't understand it, how to help them understand what it takes to become skilled in any of these fields that we are talking about, and the long-term nature of that investment and the need for public sector involvement in very long-term investments is exactly what the public sector should be doing. So I think I also would end with a call to arms, and that's your task actually, it is your task to work out exactly how important you think you are, and how to tell that story. Thanks very much.

APPLAUSE

SB As with Sir Peter Scott, Diane has generously agreed to questions, so if we can follow the protocol adopted earlier, the microphone will be passed along and say who you are and where you are from. The first question?

[Delegate] Hi, I'm very inspired by your call to arms, and I think that's very much been a theme for the conference so far, and in particular I think we've been talking about how we, as Feargal Sharkey said last night, that we should do, get all of the people, all of the talent, and all of the money, in the same room, because that's what makes policymakers and everybody else sit up and take notice, so do you have any practical advice about how to start?

DC Yes. One piece of practical advice, as I said, people who do policy are not creative people, they are often very cultured people, they like going to the theatre and the cinema and they read lots of books, but on the whole they are not practitioners. There are some exceptions actually, Maria Miller, the Culture Secretary is passionate about music and her children are musicians. But I would take them to see as much as you can, not just of performances but of what goes into the making of performances, what goes into the construction of a game, and give them that kind of practical exposure, because they do lots of visits to places, I don't know how many visits they do to the sector, but the more exposure you can give to them the better they will understand exactly how skilled you need to be to be any good at these industries.

ST Hello, I'm Sam Thompson from the University of the West of England in Bristol, I wondered if you had anything to say about the local enterprise partnerships that are being set up and that idea of devolving responsibility for skills more locally, to cities. I live in a city where we have a new mayor who is championing the idea of doing things differently, of being creative etc, but the local enterprise partnerships, I understand, are making decisions individually, if you like, across the country, and I wondered if you have any sort of views if you like about how that could be most effective for these kind of industries. I mean the same issues, I think, come up but they are people who are perhaps more locally aware.

DC The right area over which to think about skills policy is probably different around the country, so for Manchester, which I know best, because I am from there and have done work there, it would be the whole of the ten authorities, and actually further as well because people come from Leeds, or Sheffield, or Cumbria, to take part in creative activities and work in jobs in the city itself. And so in that case I'm pretty clear that it's the city regional structure that they've set up that ought to be the decision making authority, but I think that would vary around the country, so in Bristol, where there's a mayor, that might be the right place, but then it would be great if Bristol and Avon would talk to each other, because that's a much more natural

unit to think about. And so in practice I think it will depend on where you are in the country, and what you can make work, and people actually talking to each other and lobbying government for something that will fit their particular part of the country, because I think it will differ, and then obviously in the devolved nations it will differ again because they'll be having different kinds of conversations with local planning authorities in their capitals, so it's kind of a mix and match answer.

ST Thank you, just as a follow up to that I suppose from a higher education perspective we are looked at very much at that higher end that you talked about in terms of research and post-graduate level, but it's further education I suppose that's being looked to to deliver skills, and I think there's a bit of a misunderstanding perhaps about where the skills for these kinds of subject areas can be located. I guess I'm kind of interested in how to pursue that I suppose.

DC It would be great if we could overcome this putting of people into different boxes and implicitly thinking some boxes are more important than others. It's not just a creative sector problem actually, in economics as well what academics think is important in their own minds is their research and they then teach their students as if all their students are going to go on to become academic economists. So although they are doing some great things in some universities what they are not doing is delivering quite the right mix of skills, people who are going to, even if they are going to be economists, going to be doing something different. So I think it's a much sharper kind of divide in the creative skills. But I don't know exactly how you get around it because of course this unconscious or conscious bias that we have is incredibly long-standing. So I don't have any practical advice to offer you in that. But I was really intrigued by Peter's point earlier that people will fight for their local hospital but they probably don't even know anything about their local university or higher education establishments. So working out how to open up to the community I think is a really interesting and important avenue to pursue, a really good point.

HS My name's Heather Symonds, I'm from London College of Communication, so there you are, an interesting highlight there. My point would be if you are using emotional intelligence, which I think is a marvellous skill, is to look at the fact that skills have been in higher education have been a key feature of the Dearing report and have been part of PPD or PDP, whatever you'd like to call it, embedded within HE etc, so I think it's a question of identifying which one of those key skills would get the sort of agenda going that you are talking about with people who are looking at art but not thinking about what goes on behind a product. So good examples might be *The Life of Pi*, where would that have been without a special effects team, or without a director like Ang Lee, but people just see it and they get an award and that's it, let's swiftly move on to a star. And what we need to do is unpack what we do, so that you'd say OK, let's look at *The Life of Pi* bare, without these things. And we need to make movies, if

you like, ourselves, that reflect that as to the level of importance. And some colleagues have, I'm not disputing that, particularly in areas like costume design for film etc. I think we need to do more of that, and for our students what we need, which remains for me a significant absence, in the sixteen years I have been working for University of the Arts, is oral performance, we do art crits, we do orality all the time, but we very seldom accredit it properly with the weight of the written. And I do believe that you are a perfect model of the fact of what good oral performance can do. It's a major skill, it's a sophist trick, but it works like hell, so that's what our students need to do, and that's what we need to do as staff.

DC It's a profoundly important skill in the modern workplace, I think it's really undervalued. You make a great point and I think we just have such an impoverished public debate about some of these issues, and if you take the video games for example so much of what you would read and hear about video games is they are destroying children's brains, they are turning kids to violence, and then in a separate box but much less important box is oh yeah, there's an industry that does it and it's quite significant. And so I think it is a storytelling challenge, I think it is exactly a storytelling challenge and changing that narrative.

JB Julia Bennett from the Crafts Council. As you might expect I was really interested in your point about how we undervalue entrepreneurial and innovation skills and practice and craft skills. Just linking back to your point about employers finding a lack of communication skills, is there any further evidence from your work with employers about a lack of those specific skills, about innovation and entrepreneurialism, because I'm thinking in order to increase the evidence base about the need for those skills in the education system it would be helpful to make the link with what employers need.

DC I think in some ways the penny has dropped about entrepreneurship, and partly because it's been so popular on TV actually, because that means that a lot of young people have seen quite glamorous role models and they quite like the look of that. At my school we ran an Apprentice Scheme, the Apprentice programme scheme, for the year six children after they'd finished their exams last year, and I played Alan Sugar of course, and they all knew what it was about, they didn't need it to be explained to them. Amazingly, of the four groups none made a loss, they had fifty quid each to start with, they had to devise a range of products to sell at a stall, food products to sell at a stall at the summer fete, and none of them lost any money and the winning team turned fifty pounds into a hundred and twenty seven. So that was pretty impressive, and the boost that gave the children, because it's quite a deprived school, was wonderful.

So in that way I think the penny has dropped about entrepreneurship, and a lot of young people understand it as an option. A lot of employers don't want entrepreneurship, if they are honest, they want people who'll do what they are told

and not rock the boat. And funnily enough I found in a lot of the public sector activities I do, the committees and this and that, you are most effective if you have a funny kind of internal entrepreneurship, and you just say to yourself well, here's an outcome that we want, and it's not really my job, and it's not really his job, but I'll talk to him and we'll see if we can get something to happen, and it's a way of working around the constraints of public sector bureaucracies. But a lot of employers are ambivalent, I think, about entrepreneurship, and the bigger the employer the more ambivalent they tend to be about it, because understandably it exposes them to risks as well as just rocking the boat.

AC Hi, I'm Alan Cummings, previously of the Royal College of Art, currently with Imperial College London of Science, Technology and Medicine, and I sit on the board at the National Film and Television School, so I'm hovering uneasily between all of these areas. The elephant that seems to be partly in the room and partly out of the room seems to me the STEM disciplines, and the reliance on the students who graduate from the STEM disciplines into the manufacturing, pharmaceuticals, bio-technology industries and so on, as the key driver for the economy. So while eight percent may be creative economy eight percent may be financial services there's this other massive sector of the economy which is derived from those other industries. It's a comment rather than a question, but I'd like your view on it, is where our primary failure is as a collection of people involved in this area of education, is not in lobbying for what we represent in art and design, in ballet, in the cultural industries, but in what we contribute to the success of the STEM disciplines. So many of the things you've mentioned, like Apple, is the great example of the synthesis of design and engineering with a good business model as well. The Life of Pi, the guy who, in his acceptance speech for his Bafta, said you normally come to us for our science, but give us the opportunity and we will make art with you. And I thought that was a very profound illustration of that need for the synthesis between the creative education we provide and the STEM, scientific, engineering education you find in other institutions. And this, for me, is the key to the success of our own areas of education and of education in general.

DC Yeah, I completely agree, I think you make a very good point, so let's raise the curtain and invite the elephant to come trumpeting into the room. I mean obviously a lot of people talk about these as being opposite, or in tension in some way, but I completely agree that they are fundamentally intertwined together. In the textiles industry in Lancashire, which again is something I know a bit more about, the revival of the industries are very much linked to R and D into fabrics and new kinds of materials. I think we've got the wrong metaphor in a way for thinking about skills, and I did a linear kind of diagram and we talk about a spectrum of skills, and those are the wrong kinds of metaphors I think, if we could come up with something different, maybe it's a kaleidoscope and you need to pick out different bits for different kinds of activities, or

maybe it's something else, but I don't think, I think the metaphors we use to think about it actually lead us to that divergence that you mentioned in your comment.

[Delegate] I know you've got your economist head on, but as part of the BBC Trust and the biggest employer of creative practitioners in the UK today, do you see that there's a role for the BBC to help the creative industries to start to tell that story to government, about how we are needed?

DC Yes, I'm not sure we'd get a long way if we tried to do it very overtly, but I think, as I said, the BBC is in a way an industrial policy, although that's not very polite language these days, and we ought to think much more explicitly about the contribution that we make to the creative sector. Music's a really good and interesting example. I mentioned right at the start that the UK is one of the only net exporters of pop music along with the United States, and I do firmly believe that part of the reason is that we have, in the BBC, several music stations central to whose remit is introducing new acts, and they are failing if they are not introducing new bands to the public. So there's a clear innovation role there and it gives the bands the platforms that they need to start having some success in their home market.

If you look at classical music the BBC supports all the performing groups, and the executive commissioned a study looking at the efficiency of those groups, and could we take any more money out of them, and the answer was if you look in exquisite detail at the number of performers in each group, at the number you need to make an orchestra, at what the contribution is from local authorities in each case because they are around the country, the answer's no, you can't take any money out of it, because they are at the minimum critical mass they need to have the performing groups and the recording that goes around that. And actually that makes possible the eco-system of commercial classical music performance in the cities in which they are located, so again in Manchester having the fact that musicians are able to play for the BBC Orchestra as well as play for commercial entrepreneurs who bring shows to the city means that they can make a living. So we know there what the minimum is, and we can't, we are at it, and we can't go below it, so if we were forced to cut any more we'd be closing performing groups.

And I think we can think about the BBC's activities across the board in a much more, with much more clarity, about what the contribution is to the wider creative sector, and that's the contribution that we can sensibly make to this debate. But I don't think it's for the BBC to start speaking as the voice of the creative sector, and actually that would just pander to classic BBC arrogance, which we are trying to discourage.

SB Perhaps this should be the last question before we break for lunch, but in your own writings you talk a lot about the transformations that technologies produce within society, but you made reference earlier to the unfortunate fracture between cognitive

and non-cognitive area domains, the difference between knowledge and skills. What we've become increasingly shy about is really recognising the pervading and sustained force of class, which actually is that which divides the society and divides the way in which society values what it does. And I wonder, you know, in this debate, whether we see any light at the end of the tunnel, wherein that division between skills and knowledge might evaporate?

DC Some days I feel more optimistic than others about that. I think in the end I'm optimistic, because these kinds of huge technological upheaval do change societies quite profoundly, and they cause a lot of distress and disruption but then they also enable lots of people to succeed in ways that they wouldn't have in the preceding society, and we saw all kinds of examples of that in Victorian times, when the impact of steam, spreading through the economy, absolutely caused a social upheaval and transformed a country in ways that would not have been imaginable when it all started. And I think part of the answer to making it work well for most people, which is what I would care about rather than the privileged few, is what kind of social structures go around that. And on my optimistic days I look at the kind of social innovation that's going on, and the fact that digital technologies are low entry barrier, and people can go in and do it, and they don't need a lot of formal skills or privilege to be able to do it, I think that's quite encouraging. Because the Victorian era gave us mutuals and friendly societies and the learned societies and the Workers Education Association, and trades unions and all of those social institutions that actually made life much better for the great majority of people, and that's the kind of area where I would hope we've put our energy now, and bring about the good things that we all want to see. On pessimistic days I'm not so cheerful about it.

SB Thank you very much Diane Coyle, and I think we express our appreciation for your contribution in the usual way.

APPLAUSE